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THE EFFECTS OF INTERNATIONAL PARTNERSHIPS ON DEVELOPING DYNAMIC CAPACITIES IN THE LOCAL FIRMS OF THE EMERGENT MARKETS

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Abstract: *As widely acknowledged, the international joint ventures are considered as providing a potential of innovation capabilities and technological capacities. In the case of emerging markets the IJV offer for the recipient partner the possibility to prove its ability to learn, acquire and absorb the external technologies. Nevertheless, the transfer is not systematic. It is conditioned by a combination of factors that influence its success. We propose to measure the performance of the transfer for the Tunisian case at the level of perception of the managers and at the level of the type of supports made by the parent. Then we extend the analysis by measuring the potential absorptive capacity, which have an influence in terms of improving the performance effects of the IJV. Finally, we test the influence of the initial profiles characteristics of the firms, on moderating the IJV' effects, before concluding and underlying the limits of this study.*

Keywords: *International joint venture, learning capacities, developing countries, Absorptive capacity*

JEL Codes: *F23, L24, L25, O33*

1. INTRODUCTION

The evolution of the co-operations between firms has permitted a plentiful literature around the conception of the firm and its frontiers and has placed the specificity of competencies and innovation in the heart of the firm analysis (Schumpeter, 1934, Coase, 1937, Williamson, 1991). The evolution of the firm is thus observed according to the technological opportunities and its own competencies (Nelson et Winter, 1982, 1987, Teece, 1987, Foray and Lundvall, 1995). In this context, the international alliances and specially the joint ventures are considered as one of main sources of technology transfer

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and as a dynamic channel for providing a higher potential of innovation performance capabilities (Inkpen, 1998, Lin W B, 2003) and improving and increasing technological capabilities (Kumar, Kumar and Persaud, 1999). In the case of IJV between firms belonging to countries with different levels of development, these contractual relationships are a mode of acquisition of technological capacities and a catalyst of development (Bellon, 2000), as they offer to the recipient partner the possibility of acquisition new technical knowledge (Hendrickx, Catin and Bernard, 1998) and contribute to its performance in terms of learning (Lane, Salk and Lyles, 2001). However, the technological transfer is not systematic and its success is not guaranteed in advance, mainly in the case of asymmetric assets between partners. The success of the technological transfer is conditioned by a combination of factors that could influence the type and the quality of the transfer (Inkpen, 2000). The extent and the type of technologies that are being transferred to the host partner, in terms of tacit and explicit knowledge are influenced by the existence of prior core knowledge (Kumar, Kumar, Madanmohan, 2004). More specifically, the challenge for the recipient partner is not only to prove its ability in operating and maintaining the machineries at the production level but it also its ability to learn, acquire, absorb and apply new external technologies those are integrated in tangible assets, production, processes and management capabilities (Davenport, and Prusak, 2000). Considering this, we propose to measure the performance induced by the transfer inherent from the joint ventures on the recipient partners for the Tunisian case. For that purpose we based the analysis on responses to a questionnaire sent to the managers in the different sectors in year 2005 and including two types of firms, with a discriminant variable, the IJV. The purpose of this study is to test the implications of the IJV on enhancing the potential absorptive capacity of the local partner with a condition of having already a combination of factors that influence the quality and the type of the transfer inherent from the IJV. We describe first the sample selection and the methodology of the analysis. Then we test the type of effects induced by the IJV on the recipient partner. In the section 2, we test the potential absorptive capacity (PACAP), which could have an influence in terms of the efficiency of the expected effects of the IJV. The results show a correlation between the considered dimensions of the potential ACAP- the evolution of the R&D expenditure, the R&D unit and the qualifications- and the evolution of knowledge and learning. In the section 3, we test the influence of the profile variables, on moderating the previous results. Finally we conclude the study and underline its limits.

1.1 Sample selection and methodology

A questionnaire was sent to two types of firms. Those that have operated in an IJV, and those not. The questionnaire was declined in three parts related to the characteristics of the firms before the alliance, the evolution after the alliance as well as

the strategy planned for the future. Many considerations are retained when selecting the sample. First, when choosing the type of alliances, we didn't consider the firms that have participated in any out sourcing activity. Our choice was explained by the biases that could be induced in the answers. The most of the asked persons didn't evoke an evolution in their activities related to outsourcing, when we made a sample test. They just mentioned the renewal of machines to satisfy the requirement of the order. This criterion had a consequence on reducing the size of the initial sample. More over, and due to the problems of confidentiality of some information for the most of the firms, we couldn't have the exact amount of the turnover for many cases and consequently the proportion of the R&D expenses. Finally, many questionnaires were returned blank or incomplete, so 87 responses were finally considered useful. We note that despite the small size of the sample the results are not affected, since the statistical criterion of meaning of the size is respected. Furthermore, a test of homogeneity related to the distribution of sample according to the control variables is operated on the qualitative variables (sector, main activity and type of export) and verified by the Chi-square test. And a test of comparison of the averages and the variances is applied to nominal variables formed by the combination of the parameters: Turnover, Size and Age. The analysis of distribution of both sub samples as well as the study of the variance shows similar averages. The only exception concerns the Size, among which the average and the standard deviation are not similar in both sub samples. To avoid the way that could influence the results afterward, a test of Student is operated. The results show that both sub samples present the same characteristics towards the considered quantitative variables. The structure of the sample is thus homogeneous. In the extent of the analysis, the sample is then divided into profile's groups, with the method of the two steps clusters in order to identify the firms according to a combination of their initial characteristics and test the their effects on moderating the results of the analysis, which will be concerned in the last section.

1.2 The measurement of the alliances effects on developing the capacities

The purpose of this subsection consists on testing the type of effects inherent form alliances for the host partner. The effects of the alliances are appreciated at two levels. First, at the level of the perception of the asked managers, tested through a question related to the main implications of the IJV ,measured through a 10 items scale of Likert items in the following areas: the evolution of the activity of conception, the Evolution of the qualifications, the Acquisition of new explicit knowledge, the training of the employees, the Acquisition of new machinery and product material, the Access to new technology, the evolution of the profitability, the optimization of the delivery deadlines and finally the Cost control. The results of the descriptive statistics show three main significant correlations:

Table 20 *Results of the PCA analysis*

	axis 1	**axis 2**	**axis 3**
Evolution of the activity of conception	,891		
Evolution of the qualifications	,688		
Acquisition of new explicit technological knowledge	,683		
Training of the workforce	,612		,520
Acquisition of new machinery and product material		,957	
Access to new technology	,502	,720	
Evolution of the profitability		,683	
Optimization of the delivery			,863
Cost control			,719
Evolution of the product quality			,476

The first axis results from the correlation between the following items: the evolution of the activity of conception, the increase of the qualifications levels, the training of the employees, the access to the new technologies and the acquisition of explicit knowledge. The new constructed variable is called: the *evolution of explicit knowledge and learning*. The second axis results from the correlation between the variables: Acquisition of new machinery and product material and Accessing to new technology. The new constructed variable is: the *increase of the tangible assets*. The third axis is explained by the items: decrease of the costs and the delivery deadlines. These variables express: *the improvement of the organizational capacities* that could indicate the existence of a learning process within the firms, despite the fact that these last effects are not specifically technological but a part of the core capabilities (Dosi, 1988, Nelson R, 1991), those are exclusive to each firm, not easily transferable and they cannot be patented (Chandler A, 1992). The second level of measurement of the effects of alliances is tested through the results to the question related to the type of support made by the foreign parent. The question is a six item scale and concerns the following areas: support in terms of engineers training, technology access (material and equipment), financial support, management support, training and qualification of the workers and the support in R&D activity. The results show two main axes that are retained:

Table 21 *Contribution to the factorial axis signification*

items	**Discrimination measurement**	
	Axis 1	Axis 2
support in terms of engineers training	,232	,073
technology access (material and equipment	,003	,792
financial support	,190	,075
management support	,001	,267
training and qualification of the workers	,648	,036
support in R&D activity	,668	,038

The first axis is formed by the correlation between the support in terms of training the workers, the support in the R&D activity and with lesser importance in the training of the engineers. We specify that the support in terms of R&D activity doesn't means the joint R&D activity, because the foreign partners would not transfer or share their technological knowledge for many reasons (competition, confidence, ..) but mainly the support in challenging the recipient partners to enhance their efforts in the R&D activity. The new constructed variable is called: *the development of the technical learning*. The second constructed variable results mainly from the correlation between the support at the level of the machines and equipments in the renewal of the machines and the equipment, and it's named: *the evolution of the tangible capacities*. Thus, we obtain five new constructed variables corresponding to the main effects of the IJV. These new constructed variables are then used in the second step, to test whether the existence of the specific initial competencies allow the improvement of the performance induced by the transfer.

2. THE ROLE OF THE RELATIVE ABSORPTIVE CAPACITY ON ENHANCING DYNAMIC CAPACITIES

Most of the research dealing with the IJV has assumed that they enhance the firm's absorptive capacity. We note that the concept of ACAP has been extensively developed in theoretical and empirical studies. Cohen W and Levinthal D (1990) define this concept as "the firm's ability to recognize the value of new external information, assimilate it and apply it to commercial ends". Zahra S and George G, (2002) introduce the potential capacity as one of two parts composing the ACAP. The potential ACAP includes the dimensions of knowledge acquisition and knowledge assimilation. The second part of the ACAP concerns the realized ACAP and it is formed by the dimensions of knowledge transformation and knowledge exploitation capabilities. For the study case, we measure the potential ACAP as the success of the inter-firm technological transfer, is conditioned not only by the substantial amount of technology transferred but also the level of technological capacity of the local firms to absorb, assimilate, improve and further develop the newly acquired technology (Kumar V, Kumar U, Madanmohan T, 2004).This means that understanding and assimilating complex organizational knowledge requires the active engagement of both parties as well as certain structural and cognitive preconditions (Lane P and al, 2001). In this context, we note that there's no widely accepted a definite measure of absorptive capacity. Many empirical studies propose complementary factors for testing the PACAP. The firm's ability to exploit external knowledge is considered as a sub product of its R&D activities (Cohen, Levinthal, 1990). This means, that the ability of the firms to assimilate and to acquire knowledge is

evaluated through the firm's efforts in innovation activities, as R&D intensity (Stock et al, 2001) and the existence of a formally established R&D structure within the firm (Veugelers R, 1997). The number of patents hold by the firm are also considered as part of the ACAP measurement (Nicholls-Nixon C, 1993) as the highly educated and technically qualified staff those are more receptive to assimilating and transforming available external knowledge (Leiponen A, 1999, Vinding A, 2000). In other words, firms whose employees are highly educated and trained will have higher levels of absorptive capacity. Considering this, we propose to test the existence of a potential absorptive capacity within the sample and more specifically, to see if the IJV contributes to the development of the potential absorptive capacity. We test the evolution the R&D activity, related to the R&D expenditure and the existence of an R&D unit and the evolution of the proportion of the qualifications. We note that the indicator of the patents is not taken into account, because of its limitation to a few companies, which cannot be generalized to the entire sample.

2.1. The R&D unit

We propose in this subsection to test the IJV performance on one of the dimensions of potential absorptive capacity, measured through the existence actually of a unit for the R&D activity, which can be considered as a structure for codification and learning of knowledge. Empirically, a multivariate analysis is first operated in order to verify the existence or not of a difference within the sample (Bray HJ, Maxwell E S, 1985) according to the giving variable. The results in the Table 22 show a difference across the dependant items within the sample:

Table 22 *Multivariate tests criteria and F approximations for the hypotheses of no overall effect*

Multivariate tests	Value	F	Num DF	Pr>F
Pillai`s Trace	0,552	3,533	9,000	0,001
Wilks`s Lamda	0,482	4,267	9,000	0,000
Hotelling-Lawley Trace	1,007	4,884	9,000	0,000
Roy`s Greatest Root	0,932	14,604(b)	3,000	0,000

Then we test whether, the dependent variables are significant with the parameter "R&D unit". We made four situations related to this variable: the existence of an R&D unit before and after the IJV, an R&D unit before but not after the IJV, an R&D unit only after the IJV and finally an R&D unit neither before nor after the IJV. The aim is to see if the IJV has an effect on enhancing the R&D activity or not. If the results are significant in the case of having an R&D unit before and after the IJV, this could show that the company has created a learning structure (Lyle and Salk, 1996), which could be more efficient with the IJV. In fact, the existence of an R&D unit before and after the IJV can

express the engagement of the local firm in a learning process allowing it, the ability to absorb new knowledge and improve its potential absorptive capacity (Zahra and Georges, 2002). Moreover, the R&D activity is not the only considered as a factor of measuring the ability of the firm to assimilate the foreign knowledge, but it is as important as the internal factors that are the organizational knowledge and the formalization. If we find that the local firms haven't an R&D activity any more after the IJV, we can deduce the position and the strategy of the local firm toward the learning process. Giving this, we estimate the coefficient β (and its sign) for each variable: when the coefficient β is positive, it means that there's a correlation in the same way between the dependant variables and the variable "R&D unit", which is confirmed by the T test and its signification. The following table shows the results:

Table 23 *Parameters Estimates*

Dependent item	Parameter	Coef ß	standard error	'T'- test	Sig
Evolution of explicit knowledge and learning	Constant	-0,604	0,233	-2,587	0,013
	R&D before and after alliance	1,491	0,352	4,238	0,000
	R&D only after alliance	0,585	0,294	1,993	0,052
	R&D before but not after alliance	0,172	0,660	0,261	0,796
	No R&D unit before or after alliance	0(a)			
Evolution of tangible assets	Constant	-0,748	0,240	-3,124	0,003
	R&D before and after alliance	1,078	0,361	2,985	0,004
	R&D only after alliance	1,079	0,301	3,581	0,001
	R&D before but not after alliance	0,205	0,677	0,303	0,763
	No R&D unit before or after alliance	0(a)			
Evolution of organisational capacities	Constant	0,247	0,272	0,906	0,369
	R&D before and after alliance	-0,382	0,411	-0,931	0,357
	R&D only after alliance	-0,320	0,343	-0,935	0,355
	R&D before but not after alliance	-0,350	0,770	-0,454	0,652
	No R&D unit before or after alliance	0			

The results show the importance of the R&D unit before the IJV within the firms on enhancing the IJV effects in terms of the evolution of explicit knowledge and learning. The IJV seem to be a good channel for stimulating the development and the improvement of initial capacities. Furthermore, the evolution of the tangible assets is more appreciated when there is already an R&D unit before the IJV, which could facilitate the assimilation of new technology. These challenges were mentioned by some of the managers asked. Knowing that, the acquisition of new equipments require among others, the training of the staff that uses the technology. In order to confirm this hypothesis, we'll verify later, whether the training of the staff is directly correlated to the IJV or it is already well integrated in the strategy of firms before it. Thus, the results of the multivariate analysis show that the appreciation of the effects of the IJV and the success of the transfer are more observed when there's already of existent potential absorptive capacities, those can be valued and enriched by the IJV. We suppose that the existence of an explicit structure of technological learning as the R&D unit contribute to the evolution of the learning process, expressed through the evolution of the potential ACAP. In order to verify this hypothesis, we first test if there's a difference between the firms of the whole sample towards the variable of the R&D unit. The tests are significant and show a correlation between the IJV and the evolution of the R&D activity. The second step consists testing the contribution of the IJV in explaining this difference. Thus, a non-parametric test is applied for the dependent items in comparing the situations before and after the IJV according to the variable "R&D unit ". The McNemar test show an evolution in terms of the R&D activity thanks to the IJV, which means that the IJV contribute to the commitment of firms in a way of technological conversion. Even if the technological skills exist before the commitment, the relationship contributes to develop these capacities within an formal research unit. Nevertheless, due to the luck of information related to the patent for the whole sample, we cannot confirm the existence of a real research activity. We try to value the percentage of the R&D expenditures in order to see if there's a difference within the sample toward the IJV. We propose in the following subsection to test the second dimension of the R&D activity through the analysis of the evolution of the R&D expenditure.

2.2. Investment in R&D activity

We consider that the R&D unit is more than a simple outside of picture of the firm. It should be a real structure for assimilating new knowledge, contributing to the evolution of the learning process. The aim of this subsection is to test whether the IJV enhance the R&D activity for the local partner. Empirically, we try to verify whether local firms spend a consequent financial proportion to support the research activity. The managers asked informed us about the existence of a little activity of R&D that consists on adapting some products or services to the local context or in other cases to propose

some new technical part of the product that could be used by the developed firm. One-way analysis of variance (ANOVA) is used for a distributed interval dependent variable in order to test the differences in the means of the dependent variable broken down by the levels of the independent variable:

Table 24 *Difference of meaning in the sample regarding to the dependent variable*

Dependant Variable %R&D/ CA	DF	Mean square	« F » test	Sig: pr>F
Corrected Model	1	113,737	4,498	,037
Constante	1	2138,853	84,582	,000
Sample	1	113,737	4,498	,037
Total	87			

adjusted Model to sig 0,04.

The second step consists on testing whether this difference is directly correlated to the IJV. The signification of the estimated parameters is appreciated through the β coef (and its sign) and the T test:

Table 25 *Parameters estimates*

Dependant parameter	β	standard error	't' test	Sign
Intercept	3,889	0,838	4,640	0,000
firms engaged in IJV	2,331	1,099	2,121	0,037
firms non engaged in IJV	0(a)			

Figure 23 shows that companies engaged in alliances spend on average 6, 25 % of their turnover in the R&D activity, against less than 4 % on average for the other companies that consolidates the hypothesis, according to which the "R&D unit" contributes to create an internal dynamic in a way of a potential absorptive capacity development.

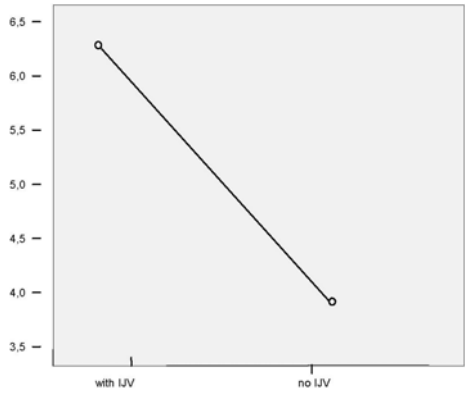

Figure 23 *Marginal mean estimates of the percentage of R&D to the turnover*

We note that we were unfortunately confronted to a problem of confidentiality of the information concerning the amount of the turnover, and consequently the amount of spent in R&D activities before the IJV. Therefore, we can only deduce that firms engaged in IJV show more interest to R&D activity than the other firms of the sample. That doesn't mean that they are engaged in innovation process allowing to radical innovative products, but they are in stage of appropriation of the foreign knowledge and learning, which was underlined by some of the asked managers.

2.3. Evolution of qualifications

Two questions related to the evolution of the professional categories were asked to the managers in the questionnaire. It concerns the distribution in percentage of the socio-professional categories within the firms before and after an IJV experience. Giving the responses, five items are formed. A test of comparison of the averages is operated, which is significant at the level of 5 %:

Table 26 *Independent Samples test*

Variables	t-test for equality of Means.					
	T	Df	Sig	Mean dif	95% wald confidence limits Lower	Upper
Engineers level	11,809	51	0,000	0,74000	0,6141	0,8659
administrative level	5,024	51	0,000	0,34000	0,2040	0,4760
Technical level	6,461	51	0,000	0,46000	0,3169	0,6031
qualified employees level	8,941	51	0,000	0,62000	0,4807	0,7593
non qualified employees level	3,500	51	0,001	0,20000	0,0852	0,3148

The results show an evolution in the human structure at all levels of qualifications. This evolution is mainly observed in the level of the engineers, which is not in opposition with the precedent results. Despite the fact that the firms are not yet engaged in the realized ACAP process, they are active in terms of learning and improvement of the technological knowledge. We see also an evolution in terms of the employees (workers) who are directly in interaction with the equipments and technological machines. These results can express an evolution in terms of complexity of equipments and machines used, and for which, the qualification must be operated for a more efficiency of the equipments use.

3. EFFECT OF CONTROL VARIABLES ON MODERATING THE RESULTS

We suppose that the effects of the IJV cannot be generalized to the entire sample. They vary according to the control variables those could moderate the results. In order to

test this hypothesis, the sample is first divided into three profiles groups with the two steps clusters method. This method allows the classification of the firms according to the combination of the initial characteristics (Kachigan SK, 1982, Everitt B et al, 2001). A test of homogeneity of the variables distributes is operated on the qualitative variables: sector, main activity and type of export and verified by the Chi-square test. In parallel, a test of comparison of the averages and the variances is applied to nominal variables formed by the parameters: Turnover, Size and Age. Many studies have acknowledged the effect of the control variables on moderating the results (Nielson, 2002, Tsang 2002, Lyles, 2003). We thus test the role of the control variables on appreciating the IJV effects. For that purpose, we first classified the sample in profile groups according to the following parameters: sector, turnover, size, age, main activity and percentage of export. Then we measure the influence of these variables on moderating the previous results. We note that giving the little size of the sample, we used a combination of control parameters and see their influence on the IJV effects. Then we operate the same analysis by considering each control variable separately. The following subsection describes the control groups before measuring the correlation between the effects of the IJV and the control profile groups.

3.1. Description of the profile groups

This step consists on making homogenous control groups by using the *Two Step Cluster Analysis method* (Kachigan SK, 1982, Everitt B et al, 2001). It's a generalization of the classic classification methods applied to the simultaneous treatment of a group of variables. We considered two categories of variables for the subsample of the firms engaged in IJV: the structural variables, formed by the age, the turnover and size (the number of employees); Then the activity variables, composed by the sector, the proportion of export (totally or partly) and the activity (conception, or commercialization). We obtain three control groups. The first profile group represents (31, 4 %) of the whole sample and composed by firms belonging to the service sector (100%), the mechanical sector (42,9%) and chemical sector (14,3%). They are medium sized firms (less than 200 employees) and with an age average of 8 years. The turnover is not relatively high. These firms are not entirely exporting and their main activity is the conception. The second group (49% of the whole sample) is composed by old companies (average of 24 years) and belonging to: the Food sector (100%), the chemical sector (85,7%), the mechanic sector (57%) and finally the electric and electronic sector (44,4%). Their activity concerns production of giving products or services and its commercialization. They are large-sized (more than 250 persons) and the turnovers are relatively high. Finally the third profile group represents 19, 6% of the whole sample with an average age of 12 years and composed by the medium-sized companies, belonging to the sector of the textile and electric those have a total export activity. The

second step consists on estimating whether the control variables have an influence on the alliances effects. For that purpose, we test first if there's a difference within the profile group according to the IJV effects. If the tests are significant, we estimate this difference according to the dependant variables. The results of the multivariate test are shown in the following table:

Table 27 *Multivariate test criteria and F approximations for the hypothesis's of no overall effect*

Effect Profile groups		value	F Test	Df	Pr>F
	Pillai's Trace	,299	2,754	6,000	,016
	Wilks's Lamda	,707	2,900(a)	6,000	,012
	Hotelling-Lawley Trace	,405	3,039	6,000	,009
	Roy's Greatest Root	,382	5,985	3,000	,002

a Statistic exact

The tests are significant; the null hypothesis is rejected, which means that's there's a difference of the alliances` effects among the profile's groups. Thus, we operate an estimation of the dependant variables that are the effects of the alliances:

Table 28 *Estimation of the parameters*

Dependent parameter	Param	β	Stand error	T	Sign
explicit knowledge and learning	Constant	0,632	0,229	2,766	0,008
	Group 1	-1,123	0,369	-3,048	0,004
	Group 2	-0,840	0,293	-2,870	0,006
	Group 3	0(a)	.	.	.
tangible assets					
	Constant	0,052	0,252	0,205	0,838
	Group 1	-0,387	0,406	-0,954	0,345
	Group 2	0,050	0,322	0,154	0,878
	Group 3	0(a)	.	.	.
organisational competencies	Constant	-0,367	0,246	-1,493	0,142
	Group 1	0,724	0,396	1,829	0,074
	Group 2	0,458	0,315	1,457	0,152
	Group 3	0(a)	.	.	.

The groups for those the results are significant are the first and the second group and the considered control groups are correlated only with the "evolution of explicit knowledge and learning". The results can be explained for the case of the first profile

group by the specificity of the sectors concerned (services and mechanics) those use more technological knowledge for the first one and characterised by the complexity of the equipments for the second one and also the requirement of more qualified persons. Unfortunately, giving the little size of the sample, we cannot confirm definitely this result. We thus test in the following paragraph the effect of the profile parameters considered separately on the results.

3.2. The results

In order to extend the analysis and see whether each profile parameter has an exclusive effect on improving the previous results, we made the same analysis operated on each parameter. The results were significant only for the parameter "sector". Indeed, the other parameters don't interfere to explain the performance registered by firms engaged in IJV. In parallel, the parameter "Sector" is not correlated with "the evolution of organisational competencies". The following table, summarize only the significant results for the correlation between the IJV effects and each of the sectors:

Table 29 *Estimation of the parameters*

Dependent variable	Parameter	β	standard error	T	Sign
explicit knowledge and learning	Constant	-0,594	0,384	-1,547	0,129
	Services sector	1,243	0,463	2,682	0,010
	Chemical	0,695	0,447	1,553	0,127
	Mechanic	1,225	0,503	2,436	0,019
tangible assets	Constant	-0,745	0,418	-1,781	0,082
	Services	0,912	0,504	1,810	0,077
	Electric	1,311	0,521	2,515	0,016

We note the significant results for the service sector compared to the other sectors, as found in other studies (Lyles M, 2003). This confirms that the firms belonging to the service sector have a relatively intensive activity in new technology, in which knowledge should be often up graded. The other control variables are not active to moderate or approve the IJV effects as noted in other empirical studies (Nielson B, 2002). We note that these results cannot be definitely considered due to the little size of the sample.

4. CONCLUSIONS

This analysis contributes in our sense to a better understanding of the effects of the IJV in terms of performances on local firms belonging to developing countries. In this context, the technological dimension is often reduced to the purchase of technological equipment. The contribution of this article is to contribute to more interests to the technological side by considering the evolution of tangible and non-tangible resources in a context of IJV. The development of the human skills is not only limited to the highly qualified skills, but concerns also the category of the workers that use the machines. The extent of the effects of the IJV depends on the potential absorptive capacity, allowing a more understanding, assimilating and improving the technological transfer. We note that while this study provides a number of insights, it has also several limitations. Our data is almost entirely self-reported assessments of the local IJV's managers; we didn't have the appreciation degree of the foreign partner, which could bias the results. . We also note the limit of the study according to the lack of in formations concerning the type of IJV and also the characteristics of the parents partners. The question could be also treated with a more large data base. This study can be also completed by making an extended analysis on the specificity of the service sector, or by making a comparison between firms from two recipient's countries.

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